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OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

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REPORT FOR THE MONTH OF NOVEMBER, 1933.

HAVRE:

Weather until the 9th was cold with snow and some sleet. Since then, the snow has disappeared and temperatures have been very mild for the season. About the only field work was burning thistles. The growth was unusually heavy this fall on all grain plots. The plot field is clear enough now so that there should be no bad drifting of snow during the winter. The fall season was especially favorable for livestock. Grass is fairly abundant in the range section. Cattle shipments are about finished for the season. Feeder and stock cattle were so cheap that shipments were late. A car of grain fed yearling steers used by the station in experimental work were shipped two weeks ago to the Spokane market. The annual livestock day was held on the second.

JUDITH BASIN:

With the exception of a few days the fore part of the month, the weather during November continued unusually mild for the season of the year. There were several days of high wind, and some of the more exposed fallow fields suffered some soil blowing. Volunteer spring grains and wild oats are still green in most of the stubble fields and are furnishing an abundance of pasture. Winter wheat seeded before September 20 continues in good condition.

Maximum temperature, 66°; minimum, -2°; precipitation, 0.39 inch.

HUNTLEY:

Climatic conditions throughout the greater part of November were very favorable for farm work and the development of fall-sown grains. A heavy fall of wet snow on November 3 was followed by an abrupt drop in temperature to -10° during the night of November 4. This was the minimum temperature for the month and was 22° below the second lowest reading. Warm weather following the storm quickly melted the snow with but a small amount of runoff. The moisture received was of great benefit to late-sown wheat and rye, much of which had been planted in dry soil and had not previously received enough moisture for germination. Wheat stands on plots and farmers fields in this locality appear to be excellent, and much of the wheat is well stooled out. Wind velocity was high enough on two or three days during the month to start soil drifting, but no crop injury from this cause has been reported. Because of the generally fair weather farmers have been able to complete their season's work in good order, and many have turned their attention to making long delayed repairs to fences and buildings, and to cleaning up their fields and farmsteads. Field work on the plots has consisted of burning weeds and repairing fences.

Maximum temperature, 70°; minimum, -10°; precipitation, 0.89 inch.

SHERIDAN:

November was mild and dry with outside work possible almost the entire month. Below zero temperatures occurred only once during the month, on the 5th. High winds were frequent. Moisture from the light rains of October finally penetrated the soil to a depth so that shallow plowing could be done fairly well, and all fall plowing finally was completed. Russian thistles also were cleared from all fields to be worked in the spring and from most fence lines where they were blown by the winds. Other station work consisted mainly of miscellaneous work and preparing corrals and sheds for winter.

Maximum temperature, 71°; minimum, -4°; precipitation, 0.41 inch.

DICKINSON:

Precipitation in November amounted to 0.60 inch. Total precipitation for the 11 months in 1933 was 11.09 inches. The deficiency for the eleven months was 3.97 inches. Snowfall amounted to 5.2 inches. Most of the snow fell during the first week of the month. This melted during the following week, and as the soil contained no frost the water was absorbed. A high wind on the 12th caused some slight damage to buildings and stacked feed, and winds later in the month caused some soil drifting on corn ground and fallow. The minimum temperature was -2° on the 5th. The mean temperature of the month was slightly above normal, and there was no frost in the soil at the end of the month, so that road work and similar jobs are still in progress in the district. Winter wheat and rye made little growth during November. Although most of the grain has sprouted, it has not emerged except on fallow where about one-third has come through. Visitors included Commissioner of Agriculture and Labor, John Husby, Bismarck; Director P. F. Trowbridge, and Professor J. R. Dice, of the Agriculture College; and E. J. George.

MANDAN:

Agronomy - Temperatures during November were about normal. High winds occurred on several different days. On the 11th an exceptionally high wind blew for nearly 24 hours. This wind extended over a large area, including both Dakotas. A great deal of soil blowing took place. The Weather Bureau at Bismarck reported a maximum wind velocity of over 60 miles per hour during this storm. At the station the wind averaged 35.6 miles per hour during the forenoon. Nearly 10 inches of snow fell during the early part of the month, which was nearly gone by the 20th. Some rain fell. The moisture was of a good deal of benefit to the soil, as there was very little run-off.

Maximum temperature, 55°; minimum, 6°; precipitation, 0.90 inch.

Arboriculture - Professor J. A. Munro, State Entomologist, North Dakota Agricultural College, arrived at the station on the morning of the 1st to inspect and fumigate nursery tree stock. This was completed on November 4. All nursery fields were plowed and left rough for the winter. Wire netting fences have been erected around several blocks of S.P.I. trees to prevent rabbit injury during the winter months. Tree seed of buffaloberry, redcedar, buckthorn, hackberry and chokecherry have been washed to remove the pulp. These seeds, Russian olive, green ash, and black walnut have been stratified. About 13,000 Northwest poplar cuttings have been made and buried. This is the smallest number of cuttings that has been made for many years. This small number is due to the almost complete failure of suitable growth this year in the cutting block and nursery field. Many of the trees in the cutting block killed completely, and the remainder are in a very weak condition. It is very doubtful if the precipitation during the month has been of very much benefit to trees, which have gone into the winter in an extremely dry condition.

BELLE FOURCHE:

November was unusually mild and dry, but high winds were of almost daily occurrence. Winter weather prevailed for a brief period early in the month, the temperature falling below zero on November 4, but with the exception of this one day, the temperature remained above 14°, and maximum temperatures of 32° or greater were recorded every day. The mean temperature for the month was 5° above normal. The entire fall has been one of the warmest in the history of the station, the mean temperature from September to November, inclusive, being equal to the highest on record for the 3-month period. The strong winds and continued lack of precipitation have been very unfavorable to fall grains, alfalfa, and sweet clover. Owing to the lack of moisture, only a small proportion of the fall grain has germinated, and it is very doubtful if the germinated grain will survive unless a substantial amount of moisture is received at an early date.

Winter wheat that emerged on the rotation plots has been damaged extensively by jackrabbits, most of the growth above the surface of the ground being completely destroyed. Work in the field was possible throughout the month. Roads and corn stubble plots were duckfooted to control soil blowing, and some of the alleyways and roads were listed.

Maximum temperature, 70°; minimum, -3°; precipitation, 0.17 inch.

ARCHER:

This was the third driest November in the history of the station. The period from October 1 to November 30 was the driest fall period on our records and next to the driest 2-month period the station has experienced, the driest being January and February, 1925. Other climatic features during November were warm weather and considerable wind. These conditions were unfavorable for winter cereals, especially those seeded on stubble land. Seedings on corn ground are in need of moisture, but fallow seedings made about September 1 are in good condition. Later seedings have not made very good showings. The warm, dry weather was favorable for corn picking, and most of this work has been completed. In places livestock have been short of water, but the dry weather has favored most of the livestock on the farms in that continuous grazing has been possible. Work at the station has consisted of moving the old granary and the milk house. All land subject to soil blowing has been ridged. Maximum temperature, 67°; minimum, 4°; precipitation, 0.04 inch.

AKRON:

November was open and favorable for husking corn, hauling and storing feed crops, and other of fall farm work. The continued lack of precipitation, however, was not so favorable for the fall seeded wheat. This crop had the appearance of suffering badly by the end of November. There has been only 0.04 inch of precipitation since September 12. The open weather of October and November was especially favorable for accomplishing this station's NRA work.

NORTH PLATTE:

Weather for the month was dry and open. A mean temperature of 39.5° is 2.9° above normal. The lowest minimum was 14° on the 6th. No rain occurred until late in the afternoon of the last day, when light showers furnished the first measurable percipitation for a period of 64 days. Rain has fallen all day to-day, December 1, with 0.84 inch recorded since the showers began yesterday afternoon. This rain will be of immense benefit as there is no frost in the ground and conditions are favorable for maximum penetration. The open weather of November was very favorable for corn husking, and, in spite of the large acreage, fair yield, and reluctance of farmers to hire help, less than normal for this date remains in the fields. Winter grains were not seriously injured by the long dry period, and with the present rain should be in good condition for the remainder of the winter.

COLBY:

Light showers during the first week in November kept the wheat that was up growing fairly well during the rest of the month, although they were not sufficient to bring up much wheat that had not been up previously. The last three weeks have been rainless. Much of the wheat that had made considerable growth was showing the lack of moisture during the last two weeks. December 1, however, 0.47 inch of rain has improved things very materially. The rain has continued at intervals throughout the day. For the most part the weather was unusually warm and pleasant during the month, with a few very windy days. There was not a lot of soil blowing at any time, however. It was

generally an ideal month for outdoor work. The fall work on the D.L.A. project has been completed. The alleys have all been listed, and a listed furrow has been run along each edge of each roadway. Where wheat has had moisture it has been making some growth most of the time. All plots of wheat are looking very good, except the corn, milo, and bean ground plots. On the milo and bean ground the wheat never sprouted. On the corn ground there is a very indifferent stand and many of the plants are weak. There were enough freezes to stop the grasshoppers early in the month. Maximum temperature, 71°; minimum, 19°; precipitation, 0.94 inch; precipitation, January - November, 1933, 16.27 inches.

GARDEN CITY:

Field work the past month has consisted of threshing experimental plots, husking corn, and general work that occurs during this time of the year. Winter wheat looks better than it has during any previous fall since 1931. Stands are quite uniform, and there is plenty of top growth. Along the borders of some plots the wheat had to be drilled over on account of destruction by grasshoppers. Considerable damage has occurred over the western half of the State from grasshoppers. November has been the warmest on record with ideal conditions for outside work. Grasshoppers are still to be found in grass and weeds, and during the warm part of the day they can be found feeding on tender wheat plants.

Maximum temperature, 81°; minimum, 21°; precipitation, 1.04 inches.

HAYS:

The weather throughout November was generally dry, fair, and quiet. No soil blowing has occurred in this locality. November is the 11th consecutive month with precipitation below normal. The total for the month was 0.54 inch, which fell on three different days. 1933 is the first year on record at Hays when every one of the first eleven months has received less than its average amount of precipitation. Winter wheat is alive and in condition to go forward when it rains. Some of the earlier seeded fields on early preparation and on fallow is furnishing some pasture. Some of the late seeded fields have not come up to a good stand and are spotted. On the Dry Land project, the wheat on fallow generally looks very well, on early preparation it also looks fair. On corn stubble ground it is quite spotted, spots with growth as heavy as on fallow alternating with spots perfectly bare. These spots vary in size from half a square yard to two or three square yards all over some corn stubble plots. The wheat is also spotted on late preparation, with none of it as good as the best growth on the corn stubble ground. Practically none of the wheat seeded on sorghum ground has germinated. Germination has been exceedingly poor on stubbled-in plots and on plots burned just previous to stubbling in. On these plots the ordinary 8-inch disk drill has produced slightly better germination than the Dempster furrow drill, but the best stand on these plots is too thin for consideration.

TUCUMCARI:

November was unusually warm and calm, with fall field work and threshing possible throughout the entire month. Threshing was completed the day before Thanksgiving. A few plots of late corn remain to be husked and weighed, peanut weights have not been determined, and cotton is not ginned, but other fall work has been completed. Precipitation for the year to date is 16.50 inches, 75 per cent of which fell during July and August. Yields of most crops will closely approach the long-time average. November precipitation of 1.05 inches was above normal but did not interfere with fall work. During the last half of the month below-freezing temperature was reached only once, with the warmest day of the month occurring November 28. The mean temperature for the first 15 days was

45.9°, and for the last fifteen days it was 51.9°. Late summer rains and favorable fall weather enabled farmers to produce and harvest without loss a fair crop of bundle feed, with fair sorghum grain and cotton yields over parts of the county. Ranges are in good condition, with livestock going into the winter in fairly good flesh.

Maximum temperature, 78°; minimum, 23°.

DALHART:

With the exception of a shower the first week of the month and a light shower the night of the 30th, the month was dry and windy. The winter wheat and rye seeded early has become well established, but most parts of the fields and plots show a blue-green cast indicative of a lack of sufficient moisture for vigorous growth. Wheat and rye seeded the latter part of October has just emerged and has made but little growth. Grasshoppers have bothered the late seedings more than the early seeded wheat and rye. They are chiefly noticed around the edges of the plots. The south field, except the MC plots, has sufficient growth of rye to keep down soil blowing, or at least it seems to have now. During the past week the worst soil blowing since May has occurred. The fall plowing was done during the month, and as good a job as usual was done. An abundance of beetles, Calosoma, during the fall gave an opportunity to study their carnivorous habits. They seem to be especially fond of the fall army worm, and it is interesting to watch them 'hunt' for them in corn.

Maximum temperature, 76°; minimum, 22°; precipitation, 0.90 inch.

BIG SPRING:

Weather conditions during November were very favorable for harvesting and also the maturing of late planted crops. A killing frost has not been received in this section of the county, and it is now about 30 days beyond the normal date for it. This late and favorable fall has permitted many farmers to make sufficient feed to take care of their needs. With a normal growing season, feed crops would have been a failure. Practically all feed stuffs planted during July have matured grain. Sixty head of Hereford calves were received at the station November 3. They were kept on a preliminary feed until November 22, when they were divided into four lots for the feeding experiment, which is a duplicate of that conducted last year.

Lot 1.	Lot 2.	Lot 3.	Lot 4.
Whole threshed milo.	Ground threshed milo.	Whole milo heads.	Ground milo heads.
Cottonseed meal.	Cottonseed meal.	Cottonseed meal.	Cottonseed meal.
Sumac fodder.	Sumac fodder.	Sumac fodder.	Sumac fodder.
Limestone.	Limestone.	Limestone.	Limestone.

Station work has consisted of heading milo, picking cotton, and threshing. Threshing will probably be completed this week, and there will be another light picking of cotton to make. Cotton, where stands were obtained in June, is yielding considerably above normal this year. Many farmers are reporting ½ to ¾ of a bale to the acre.

Maximum temperature, 83°; minimum, 34°; precipitation, 1.15 inches.

LAWTON:

The moisture deficiency continued to accumulate throughout the month with appreciable detriment to small grains. Four showers produced a total of 0.42 inch. A deficiency in rainfall each month from August to November, inclusive, amounted to 4.74 inches. The first killing frost was recorded November 8, only five days later than the long-time average. The mean monthly temperature of 52° was 3° above the average. A maximum temperature of 80° was recorded on the 14th, and the last four days of the month the maximum ranged

from 75° to 79°. Small grains have made but little growth, and the crop in general shows an acute need of moisture. On poorly prepared seed beds the thin stands secured at seeding time are somewhat further reduced by dead plants. Fall pasture provided by wheat, oats, or barley is negligible this year. Fall plowing was possible on about half of the plots, and the remainder of such work will necessarily be delayed until moisture conditions are improved. Only a mediocre job of plowing was possible on the work already done. Cotton picking was completed November 14, and the crop has been ginned. A very good quality of fiber was produced, and the staple was average or better. The total yield of slightly more than six bales was above the average. Picking throughout the southwestern part of the State is pretty well completed, and most of the gins are running only at stated intervals. The crop in general was one of the best in several years.

WOODWARD:

There was 0.86 inch precipitation in October and 0.52 inch in November, mostly in light showers. Early planted wheat grew rapidly and stooled out heavily, and many leaves are beginning to die because of exhaustion of soil moisture. Farm fields which are pastured and hence have the use of water by plants diminished, it seems logical, should yield better than plots which are not pastured, under conditions like the present. It seems hardly practical to pasture rotation plots, but it seems highly important that check plots be run on which the effect of pasturing may be determined, since this is a universal practice on farms. Late planted wheat is making a healthy growth and stooling out earlier than usual because of the continued very warm weather. Some spring flowering shrubs are reported to be in bloom, and buds on Chinese elms and other trees are swelling. Where they get water, many of the herbaceous perennials are setting buds heavily and apparently are inclined to start the season all over again. On some trees in protected places where water is ample the leaves are still green. Most trees, however, have lost their leaves, more due to drought and habit than to cold weather. Maximum temperature, 80°; minimum, 28°.

PENDLETON:

Ideal fall weather prevailed during the most of the month, from the 11th to the 18th heavy ground fogs remained all day. No low temperatures were recorded. The mean for November was 40.8°, or 2.8° above normal. The fall seeding of wheat on the rotation, tillage, fertilizer, and increase plots was completed November 8. The wheat has not emerged yet, but it has sprouted and should emerge within a few days. The fall sown wheat was harrowed on the 20th in an attempt to destroy the many tar weed seedlings. The last date-of-seeding plots in the cereal project were sown on the 30th. All the fallow land to be spring seeded was cultivated with a spring-tooth harrow on the 23rd and 24th to kill weeds and leave the ground rough over winter. On the station grounds the chrsyanthemums, marigolds and phlox are still blooming.

Maximum temperature, 69°; minimum, 22°; precipitation, 0.97 inch.

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